

System for the Relationship of Symbiosis between Tourism and Agriculture in Hindelang, the German Alps

著者	Kureha Masaaki
雑誌名	Science reports of the Institute of Geoscience, University of Tsukuba. Section A, Geographical sciences
巻	23
ページ	75-90
発行年	2002-03-25
URL	http://hdl.handle.net/2241/7365

System for the Relationship of Symbiosis between Tourism and Agriculture in Hindelang, the German Alps

Masaaki KUREHA

Abstract

This paper discusses relations between tourism and agriculture in the German Alps thorough an analysis of three points, namely the situation of tourism and farming, how they coexist, and the conditions of this symbiosis, focusing on the case of Hindelang in the German Alps. While Hindelang has been developed as a health and holiday resort, the number of beds and tourists indicates stagnation over the last 20 years. Dairy farming by small farmers is dominant in the agricultural sector because of the difficult natural and locational conditions. A new attempt to create the Öko-Modell Hindelang began in 1985. The main projects for this model are characterized by the necessity to make use of the agricultural land extensively. The beautiful landscape in Hindelang could be mostly maintained by such extensive farming and thus encourage a certain demand for tourists who appreciate the natural and cultural landscape in the Alps.

INTRODUCTION

Many problems exist in the mountainous rural areas in Japan, especially those related to agriculture, which should be the main economical activity in the area. Today, promoting rural tourism has proved to be very popular in those regions, but this has been accompanied by a decrease in agricultural elements.

The purpose of this paper is to examine those problems in the Eastern Alps. Agriculture in the German and Austrian Alps has relatively been much more maintained than in the Western Alps and tourism has also been developed over the last 50 years. Furthermore, the tourism form, "the farm holiday (Urlaub auf dem Bauernhof)", has become very popular. Therefore, we can observe a good system model for the symbiosis between tourism and agriculture in the Eastern Alps. This study attempts to analyze this relationship from three points, namely the situation of tourism and

farming, how they coexist, and the conditions for this symbiosis, focusing on the case of Hindelang in the German Alps. Hindelang is one of the best places for such a study, because it has become a typical village in which the symbiosis between tourism and agriculture can be recognized through the new development of rural tourism.

Many Japanese articles have focused on analyzing tourism and agriculture in the German Alps. In accordance with an increased interest in green tourism in Japan, many books have been published on green tourism or rural tourism in Germany and in other countries in Europe over the last ten years (for example Yamazaki et al., 1993; Miyazaki, 1997). Some parts in those books deal with cases of rural tourism in the German Alps, but the descriptions lack detailed analyses. Only two papers, focusing on accommodation provided by farmers, are concerned with geography of rural tourism. Ukita (1998) analyzed the

regional characteristics of pensions managed by farmers in Germany and studied one case of a pension in a village southwest of Munich. Kasagi (1999) also dealt with some cases of pensions run by farmers in the German Alps. As an agricultural study, Ichida (1997) analyzed mountain farming in Bavaria.

Numerous researches have examined rural tourism in the Eastern Alps. In German speaking countries many papers have dealt with Alpine tourism and agriculture in the context of soft tourism, *Sanfter Tourismus* (Kramer, 1983; Mose, 1988). Those studies mainly analyzed the situation from tourism angle. Conversely, many agricultural geographers have discussed farming in the Alpine region (Bätzing, 1996; Ruppert, 1994). Some of them focused on tourism in rural areas by analyzing farm holiday (Eder, 1997; etc.). Much research on tourism has also been conducted in Hindelang, most of which explains the *Öko-Modell Hindelang* (Besler, 1992; Maier, 1995; Hemmer, 1997; Brendle, 1999). Höppl (1992) analyzed changes in the regional structure in Hindelang. However, these papers do not discuss the regional conditions for symbiosis between Alpine tourism and farming.

OUTLINE OF HINDELANG

Hindelang is a Gemeinde, a municipality, in the Allgäu region, which is located in southwestern Bavaria, Germany (Fig. 1). The Allgäuer Alps extend from the Southwest to the Northeast reaching an elevation of about 2,500 m in Oberallgäu, in the southern part of Allgäu. Hindelang is situated in a sub valley of the Allgäuer Alps and has 4,900 inhabitants within an area of 137 km². There are six districts in this region; Hindelang (825 m above sea level, Photo 1), Vorderhindelang (832 m), Bad Oberdorf (822 m), Hinterstein (835 m), Oberjoch (1,136 m), and Unterjoch (1,013 m).

The mountains in the German Alps have a relatively lower altitude than those in the other Alpine regions. The topography in Oberallgäu

is very complex due to much erosion, because most of the mountains are formed from limestone. Therefore, the landform is suitable for hiking or mountain climbing. While the Hindelang, Vorderhindelang, Bad Oberdorf, and Hinterstein districts are located on the bottom plains of the valley with a lower altitudinal level (Photo 1; 2), the Oberjoch and Unterjoch districts exist on small plains on the mountainside and have relatively higher elevations. The climate in Hindelang is characterized by cool temperatures, even in summer. The mean temperature in July reaches only about 15 °C (Borsdorf und Eck, 1986).

Hindelang had previously consisted of small villages engaged almost solely in agricultural activities. Its development as a health resort, based on hot spring, began in the 17th century (Maier, 1970). The area also became popular as a climatical health resort for curing tuberculosis during the industrial revolution. Alpinism and summering came into existence only after the construction of a railway network at the end of the 19th Century. Since the 1930s, ski tourism has been developed mainly in Oberjoch (Borsdorf und Eck, 1986; Photo 3). Despite the development of winter tourism, the area has more tourists in summer. People in Hindelang have attempted to grope alternative forms of tourism, which focus on the environment based on the symbiosis between farming and tourism, since the middle of the 1980s. This attempt in Hindelang has become very famous as the *Öko-Modell Hindelang* in the Alps (Besler, 1992; Maier, 1995; Hemmer, 1997; Brendle, 1999).

ACCOMMODATION FACILITIES AND TOURISTS IN HINDELANG

Gemeinde Hindelang had only 201 accommodations with 1,962 beds in 1953. The number increased to 472 facilities with 4,206 beds in 1969. About two thirds of those accommodations fell into the cheap facility bracket, such as pensions or private lodging facilities. Further increases in the number of

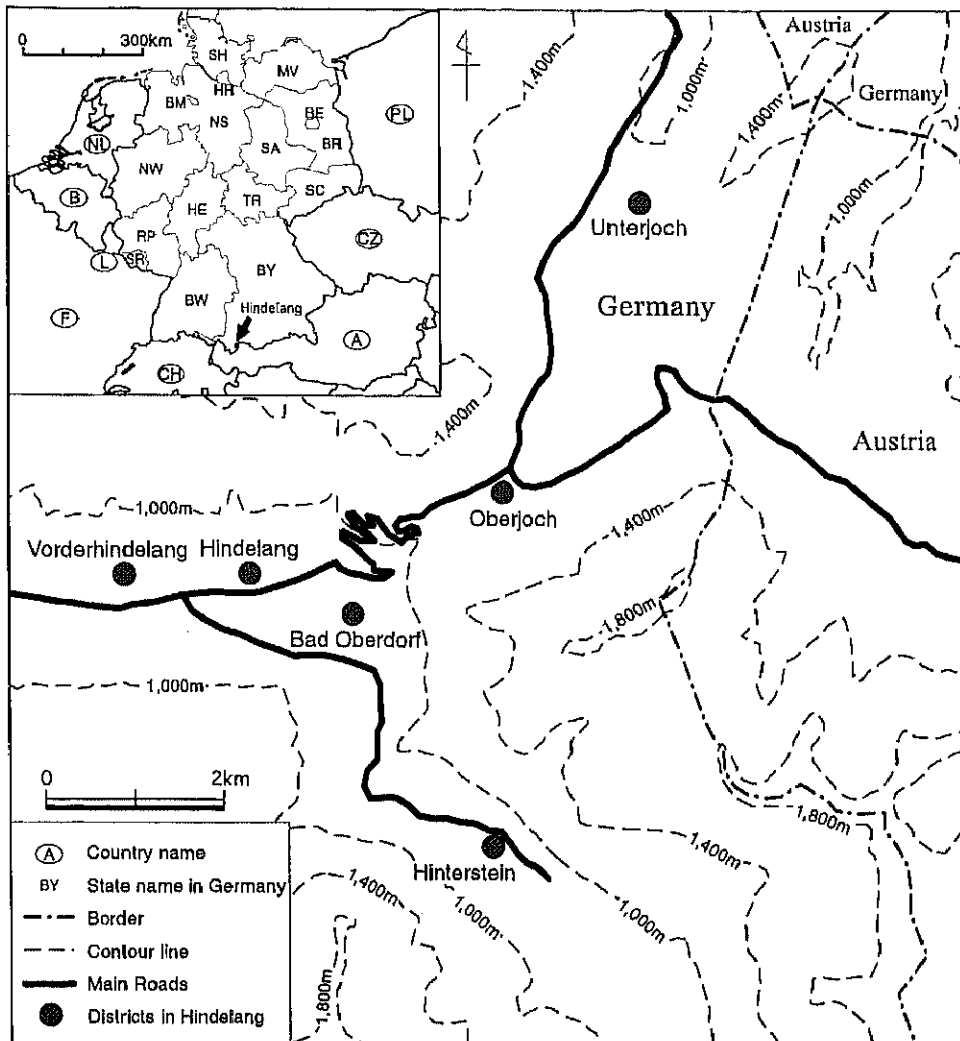


Fig. 1 Study area

BE: Berlin BM: Bremen, BR: Brandenburg, BW: Baden-Württemberg, BY: Bayern, HE: Hessen, HH: Hamburg, MV: Mecklenburg-Vorpomeln, NS: Niedersachsen, NW: Nordrhein-Westfalen, RP: Rheinland-Pfalz, SA: Sachsen-Anhalt, SC: Sachsen, SH: Schleswig-Holstein, SR: Saarland, TR: Thüringen

beds continued, reaching a total of 7,060 in 1988. Table 1 shows the changes in the number of beds by category. The number of hotels and apartments¹⁾ has notably increased. The latter were newly emerged facilities in Hindelang. From 1988 to 1998, we can see only small increase in the number of beds. While the number of beds in the apartments increased further, pensions and private facilities reduced

their beds counts.

Table 2 indicates the number of lodging accommodation and beds by type and district. The existence of many small-sized accommodations is one of the significant characteristics of Hindelang. Apartments dominate 260 units of all 451 facilities and have about 2,500 beds. The mean capacity of the apartments averages only ten beds. Pensions,



Photo 1 Landscape of the Hindelang district (November 1999)



Photo 2 Landscape of Bad Oberdorf (November 1999)



Photo 3 Ski area at Oberjoch (August 2000)

Table 1 Changes in capacity of beds in Hindelang, 1969-1998

types of accommodations	1969	1988	1998
sanatoriums, therapeutic hotels	855	667	1,407
hotels		1,023	531
Gasthöfe	289	312	240
dormitories by associations	129	427	386
apartments	N.A.	1,671	2,569
pensions	1,423	1,270	943
private rooms	1,430	1,518	1,005
others ^{a)}	80	172	173
total	4,206	7,060	7,254

a) mountain huts, campground

Sources : 1969 : Maier(1970)

1988 : Herz(1993)

1998 : Kurverwaltung Hindelang

Table 2 Accommodations in Hindelang by districts and types, 1999

types of accommodations		Hindelang	Vorderhindelang	Bad Oberdorf	Hinterstein	Oberjoch	Unterjoch	合計
units	therapeutic hotels	1	0	1	0	2	2	6
	hotels	10	2	5	3	7	4	31
	Gasthöfe	3	0	1	0	0	1	5
	apartments	83	41	57	47	25	7	260
	pensions	18	6	12	6	5	9	56
	private rooms	15	2	13	8	6	3	47
	mountain huts			1		1		2
	rooms on farms	7	7	7	2	2	19	44
	total	137	58	97	66	48	45	451
beds	therapeutic hotels	72		55		139	79	345
	hotels	992	59	285	109	354	371	2,170
	Gasthöfe	102		30			12	144
	apartments	980	300	496	378	320	40	2,514
	pensions	331	101	199	89	163	252	1,135
	private rooms	110	6	140	38	83	28	405
	mountain huts			70		20		90
	rooms on farms	62	36	65	11	72	199	445
	total	2,649	502	1,340	625	1,151	981	7,248

Source: Kurverwaltung Hindelang

private lodging facilities, and accommodations run by farmers follow the apartments. While each pension has about 20 beds on the average, the figures remain at only 10 beds in the case of the latter two types. Hotels and spa-hotels dominate only 37 units, but they have about 2,500 beds. This corresponds to one third of all beds in Hindelang.

Table 3 represents the management type of the lodging facilities. The accommodations that manage only apartments dominate with 63 %, namely 283 units out of all 451 facilities. Among the remaining 168 accommodations, 90 hotels and pensions have not only rooms for let, but also apartments. Therefore, over 80 % of all lodging facilities in Hindelang manage the apartments. There are 44 lodging facilities for farm holidays, 75 % of which have apartments.

Most of the accommodations are located in the Hindelang district (Photo 4), which occupies the central place in the Gemeinde Hindelang. Bad Oberdorf with its hot spring dominates the next position and Oberjoch with its ski ground follows this. In these districts, many large hotels and apartments exist as the main lodging facilities. Conversely, Vorderhindelang,

Hinterstein, and Unterjoch do not have as many accommodations. While apartments are the perceived as main form of accommodation in the first two districts, lodging facilities on farms are distinctive in Unterjoch.

The number of tourists in Hindelang has continuously increased since the end of World War II (Fig.2). Although Hindelang only had less than 30,000 tourists at the beginning of the 1950s, and despite a period of stagnation around 1970 and the first half of the 1980s, the number of tourists reached 1,200,000 in 1998. However, differences exist between the number of arrivals and tourist nights. The number of tourist nights, which recorded about 400,000 in 1950, rose to one million in the middle of the 1970s. Though there were some small variations after that, the number of tourist nights has remained the same level.

Therefore, the average length of stay by tourists has slowly decreased in Hindelang. The number recorded was 11 to 15 nights between 1950 and 1975. Since then, the average length of stay has continuously declined and recorded only eight nights in 1998. Table 4 represents the number of tourists, tourist nights, and the

Table 3 Management forms of accommodations in Hindelang, 1999

types of accommodations	only rooms for let	rooms for let and apartments	apartments	total
therapeutic hotels	5	1		6
hotels	10	21		31
Gasthöfe	2	3		5
apartments			260	260
pensions	20	36		56
private rooms	29	18		47
mountain huts	2			2
rooms on farms	10	11	23	44
total	78	90	283	451

Unit: the number of lodging facilities

Source: Kurverwaltung Hindelang



Photo 4 Main street in the Hindelang district (November 1999)

average length of tourist nights in recent years divided into winter and summer seasons. While the length of stay in both seasons also decreased, that in the summer season is one or two nights longer than that in winter.

The number of tourists in Hindelang peaks in the summer season. Fig. 3 demonstrates the variation in tourist nights by month in 1988 and 1998. Two peaks in this monthly change are recognized, namely January to March, and July

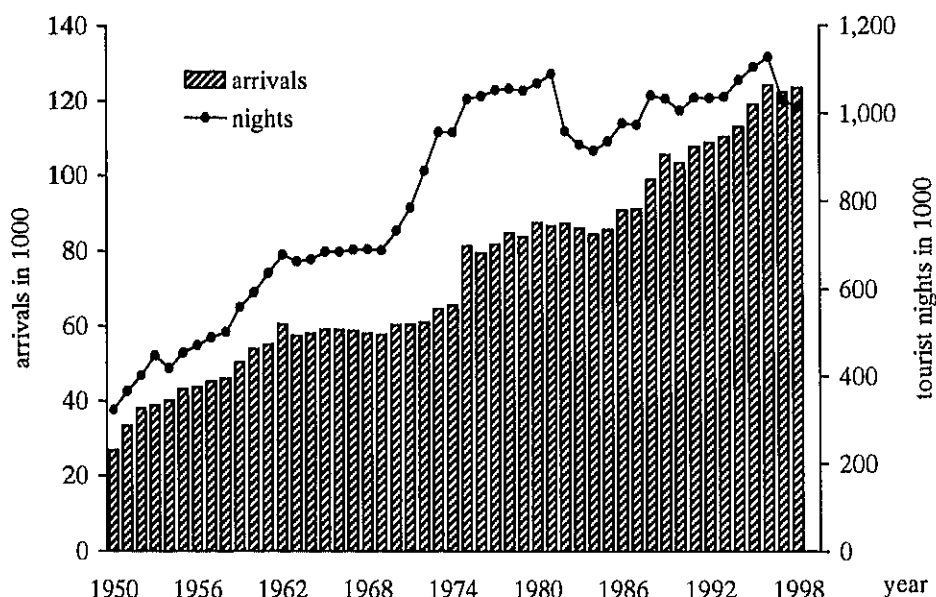


Fig. 2 Evolution of visitors to Hindelang, 1950-1998

Sources: Kurverwaltung Hindelang and Herz (1993)

Table 4 Average length of stay of tourists in Hindelang, 1994-1998

year	winter half year ^{a)}			summer half year ^{b)}		
	arrivals	nights	average length of stay (nights)	arrivals	nights	average length of stay (nights)
1994	43,714	372,471	8.5	68,790	691,614	10.1
1995	47,859	401,201	8.4	70,509	695,415	9.9
1996	50,156	427,667	8.5	72,568	694,714	9.6
1997	47,979	390,261	8.1	75,168	658,737	8.8
1998	50,001	360,440	7.2	72,429	645,495	8.9

a) Winter half year includes from November of the past year to April.

b) Summer half year includes from May to October

Source: Kurverwaltung Hindelang

to September. There are more tourists in the summer season than in winter. The other seasons, spring and autumn have fewer tourists. Hindelang has few guests then, especially in November. People often close their accommodations and take a holiday in this month.

Table 5 indicates the number of beds and tourist nights by accommodation types. The

proportion of tourist nights is different from that of beds by facility types. While sanatoriums and therapeutic hotel dominate one fifth of the total beds, the proportion from tourist nights reaches about 29 %. Apartments, pensions, and private rooms conversely show less proportion in tourist nights than that in beds. Those facilities therefore have less demand compared with their bed capacity.

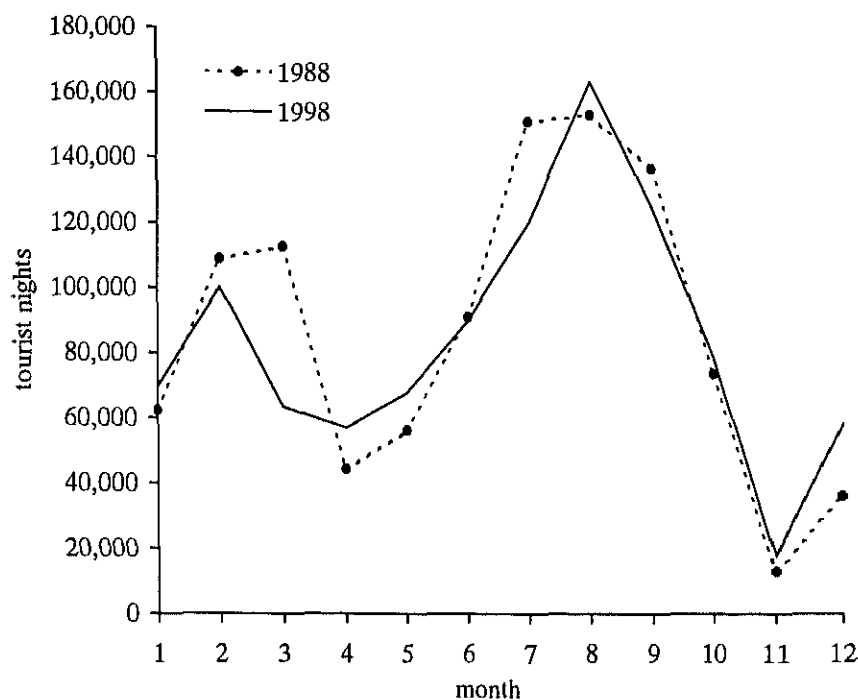


Fig. 3 Monthly fluctuations of tourist nights in Hindelang, 1988 and 1998

Sources: Kurverwaltung Hindelang and Herz (1993)

Table 5 Tourist nights in Hindelang by types of accommodations, 1998

type of accommodations	beds	tourist nights	proportion by beds (%)	proportion by nights (%)
sanatoriums, therapeutic hotels	1,407	292,595	19.4	28.9
hotels	531	90,292	7.3	8.9
Gasthöfe	240	37,572	3.3	3.7
dormitories by associations	386	61,337	5.3	6.1
apartments	2,569	312,955	35.4	30.9
pensions	943	107,500	13.0	10.6
private rooms	1,005	85,902	13.9	8.5
others	173	23,881	2.4	2.4
total	7,254	1,012,034	100.0	100.0

Source: Kurverwaltung Hindelang

There are 44 lodging facilities on farms with 445 beds, only 6.1 % of the total beds in Hindelang (Table 2). This type of accommodation has about 5,600 tourists with 53,000 tourist nights recorded in 1998 (Table 6). Variation in tourist nights shows a small change from 1993 to 1998 in Hindelang. However, there is a difference between districts. While the number of guests in rooms on farms in Oberjoch and Unterjoch increased between 1993 and 1998, the other districts all indicate a decrease. The average length of stay is relatively longer than the other types of lodging facilities for the price performance. The share of tourists that stay in rooms on farms, however, reaches only 5.2 % of all facilities by tourist nights (Table 6).

Table 7 demonstrates regional differences in the number of tourist nights by comparison with the supply of beds. Oberjoch has the most tourist nights, where the proportion of tourist nights highly exceeds that of beds, and their stay is longest with 9.2 nights. The Hindelang district dominates the next position. Vorderhindelang and Hinterstein indicate not only a small number of tourists, but also less proportion from the demand compared with bed

supply, because these places do not have as many attractions for tourists.

One of the characteristics of the German Alps is that most of the guests come from Germany. Hindelang also shares this tendency. Namely, the share of German tourists is 97.6 % of all guests (Table 8). Most of the tourists come from the former West Germany, in particular 26 % from Nordrhein-Westfalen. Baden-Württemberg and Bayern dominate the next positions. The number of tourist nights from these three states (Länder) reaches over 60 %.

AGRICULTURE IN HINDELANG

From the paper by Ruppert (1994), which examined agricultural structure in the German Alps, we can indicate some of the agricultural characteristics in Hindelang. While there are relatively more farmers in Hindelang, most of them are part time. In addition, very small farmers dominate as regards landownership and the number of livestock. Regional differences in farming in the German Alps depend on natural conditions, especially the altitude level. Because Hindelang is located in one of the highest regions in the German Alps, the natural

Table 6 Tourist nights in the rooms on farm in Hindelang, 1993 and 1998

districts	1993			1998		
	arrivals	nights	average length of stay (nights)	arrivals	nights	average length of stay (nights)
Hindelang	907	8,766	9.7	545	5,286	9.7
Vorderhindelang	715	8,303	11.6	687	6,657	9.7
Bad Oberdorf	1,282	12,628	9.9	860	8,279	9.6
Hinterstein	337	3,379	10.0	293	2,590	8.8
Oberjoch+Unterjoch	2,233	22,010	9.9	3,260	30,306	9.3
total	5,474	55,086	10.1	5,645	53,118	9.4

Source: Kurverwaltung Hindelang

Table 7 Tourist nights in Hindelang by districts, 1998

indexes	Hindelang	Vorderhindelang	Bad Oberdorf	Hinterstein	Oberjoch	Unterjoch	total
beds	2,027	587	1,430	689	1,573	948	7,254
arrivals	35,309	6,620	23,084	9,480	31,473	17,402	123,368
tourist nights	272,190	57,228	183,624	79,283	288,229	131,480	1,012,034
average length of stay (nights)	7.7	8.6	8.0	8.4	9.2	7.6	8.2
proportion by beds (%)	27.9	8.1	19.7	9.5	21.7	13.1	100.0
proportion by arrivals (%)	28.6	5.4	18.7	7.7	25.5	14.1	100.0
proportion by tourist nights (%)	26.9	5.7	18.1	7.8	28.5	13.0	100.0

Source: Kurverwaltung Hindelang

Table 8 Tourist nights in Hindelang by state (Länder), 1998

Länder	tourist nights	%
Nordrhein-Westfalen	266,403	26.4
Baden-Württemberg	194,605	19.3
Bayern	161,199	15.9
Hessen	87,067	8.6
Rheinland-Pfalz	74,474	7.4
Niedersachsen	64,360	6.4
Sachsen/Sachsen-Anhalt	41,918	4.1
Hamburg/Bremen/Berlin	37,912	3.7
Schleswig-Holstein	20,440	2.0
Thüringen	13,466	1.3
Saarland	13,075	1.3
Brandenburg	8,558	0.8
Mecklenburg-Vorpommern	3,978	0.4
total Germany	987,455	97.6
total foreign	24,579	2.4
total	1,012,034	100.0

Source: Kurverwaltung Hindelang

environment is normally very serious for agriculture.

Agricultural land use in Hindelang, therefore, is very extensive. There are about 5,000 hectares of agricultural land in Hindelang. Only one fifth of this, however, is used as productive land

for cutting hay and pasturing. The remaining 4,000 hectares with low productivity located at the higher altitude level is used as alpine pastures for grazing. There was no cultivated land for grain in Hindelang in 1995. 120 farmers were managing livestock raising in

1997, of which 80 were breeding cattle and 10 fattening up pigs as their main agricultural work. Although dairy farming plays an important part among livestock raising, there are only 554 dairy cattle out of all 1,389 cattle. Therefore, the average number of milk cows is around seven on dairy farmers. Such small dairy farmers are dominant in Hindelang with a few exceptionally large farms, which have even 15 milk cows. In addition, many farmers also raise beef cattle.

While dairy farming is characterized as the most important agricultural branch in Hindelang, this type of farming has a locational disadvantage, because Hindelang is situated far from the market, creating a problem for transporting milk. Therefore, the transportation of products processed from milk rather than fresh milk is increasing. In 1999, about 40 % of the milk produced by dairy farmers in Hindelang was processed to cheese, butter, and other dairy goods in some small factories in the

commune. Dairy farmers transport the remaining 60 % of fresh milk to a milk plant in Sonthofen, a neighboring town. The same situation can be observed with meat. Beef or pork is often processed to ham, sausage, or other products in some small factories in Hindelang (Photo 5).

These kinds of products processed from milk and meat are mainly oriented towards tourists in Hindelang. Moreover, some hotel managers in Hindelang buy the products for cooking. However, only about 10 % of such local products are now used in accommodations in Hindelang, because the goods are very expensive due to the higher costs of small-scale production and management.

AN ATTEMPT TO CREATE THE ÖKO-MODELL HINDELANG

Outline of the Öko-Modell Hindelang

As mentioned above, the Öko-Modell (eco-model) Hindelang is characterized as an



Photo 5 Meat processing factory and shop in Vorderhindelang (November 1999)

advanced model for the symbiosis between tourism and agriculture in the German Alps. The author explains the outline of the Öko-Modell after Hemmer (1997), Brendle (1999), and his field survey.

The opportunity to create the Öko-Modell arose in 1985. In those days, the European Community was scrabbling for ideas to make land use sustainable for the environment. The EC created a policy giving subsidies to some areas in order to sustain mountainous agricultural land that would otherwise be abandoned for cultivation. Bund Naturschutz Bayern (The Environment Conservation Confederacy in Bavaria, a corporation aggregate) developed the "Öko-Modell Allgäu" concept according to the policy. The concept aimed maintaining the typical cultural landscape in Allgäu was introduced to various municipalities in the Allgäu region. However, only the mayor of Gemeinde Hindelang showed an interest in the model project. Many and various plans have been drafted and realized since then in Hindelang.

At first, Bund Naturschutz Bayern made an ecological map of the agricultural land. Based on this map, a pilot project was started in the Hinterstein district to make use of agricultural land more extensively. This project was then carried out for all arable land in the all districts after the attempt at Hinterstein. As a result, 87 farmers accomplished extensive farming in the municipality. In 1992 these farmers organized an association for landscape improvement, the "Hindelang - Natur & Kultur (Hindelang - nature and culture)" and made a start. The association obligated the farmers to undertaken agriculture responsive to the environment in this region. There have been some limitations to the farming, for example in the number of livestock (up to 1 GVE (Großvieheinheit; unit for big livestock) per hecter), in feed (over 90 % from the municipality), and in the halting of chemical nitrogenous fertilizer use. This type of farming is costly. Therefore, aid for the farmers was

introduced based on various funds, from the European Union, Bayern state (Kulturlandschaftsprogramme; program for cultural landscape), subsidies from local government Hindelang (150,000 Mark per year), and sponsors of the association (100,000 Mark per year). From 1992 to 1994, the sponsor was a Japanese firm, Riso Kagaku. In 1995 and 1996, the new sponsor was from Germany. Since then, there have been no sponsors. The subsidies are distributed directly to farmers in proportion to the difficulty of farming.

In addition to the new challenge towards extensive agriculture, selling agricultural products directly has become increasingly popular. The latter attempts include the selling processed products as shown above. Nearly all cheese in Hindelang had been produced at the many Alpine chalets until the 1960s. Since then, such production form had significantly declined. In the 1990s, however, local residents began to produce cheese again at three Alpine chalets. A company for selling such processed goods was organized in 1994, the "Hindelanger Bauern Vermarktungs GmbH & Co. KG." (Marketing Company by farmers in Hindelang). The company consists of 70 farmers from the Hindelang - Natur & Kultur Association, and has a shop with a processing factory in the Vorderhindelang district (Photo 5; 6).

The concept for tourism development in Hindelang

The local government of Hindelang has formed the concept for tourism in Hindelang. The concept of five main goals for the tourism development in Hindelang in the future is as follows:

1. The further new building for tourism should be done only in the case of a harmony with the settlements and the natural environment in Hindelang.
2. It is very important for tourism in Hindelang to keep the cultural landscape based



Photo 6 Signboard of meat processing factory (November 1999)

on the farming and the alpine pasturing.

3. Ecological objectives are emphasized, since proportion of the protected area for maintain landscape and natural preservation reaches about 85 % of all land in Hindelang

4. Objective target should be based on a transregional and international cooperation, namely with other places in the German and Austrian Alps.

5. An Extension of the quality label, Hindelang - Natur & Kultur, should mainly be focused.

These goals are closely related to the direction in the development as Öko-Modell in Hindelang.

Factors for symbiosis between tourism and agriculture in Hindelang

Important persons in Hindelang perceived some structural problems in the second half of 1980s. Namely, farmers identified the lack of

competitive abilities for agricultural production compared with other regions more suitable for farming. Decision-makers in the tourism industries also recognized increasing competition with other tourism resorts. Some environmentalists noted the declining of agricultural use as a forming force for the cultural landscape.

To create Öko-Modell Hindelang was one of the solutions to these problems. Especially, the transformed agricultural concept played an important part. Farmers in Hindelang do agricultural activities only under the concept to make use of agricultural land extensively. It is difficult to observe such cases in the Alpine region.

The number of tourists is continuously increasing as a result of the becoming to a famous place for tourists with regard to Öko-Modell Hindelang. It means that people in the tourism sector could ensure their economic

bases, on the one hand. However, on the other hand, ecological problems may grow further because of the increase of tourists. Therefore, there should be still more considerations in order to realize sustainable tourism development and to maintain natural and cultural landscape in Hindelang.

CONCLUDING REMARKS

While Hindelang had been developed as a health resort since the 17th century, the number of tourists for holiday has remarkably increased since 1950. The tourism industry has become a significant economic activity. However, the number of beds and tourists indicates stagnation over the last 20 years. Apartments now play an important role in the structure of beds. The main agricultural activity in Hindelang is stock farming, especially dairy farming. Small farmers dominate with the breeding of milk cows, because Hindelang has serious natural and locational conditions for farming. Some milk products are processed within Hindelang, partly for tourists.

An attempt to realize the Öko-Modell Hindelang began as a plan in Bavaria in 1985. Many and various projects have been drafted and realized since then. The plans by the association for landscape improvement, Hindelang - Natur & Kultur, have played a significant part. Its main projects are characterized by the necessity to make use of agricultural land use more extensively. Farmers can directly receive some subsidies from organizations, because they have to manage extensive dairy farming in spite of the difficult natural conditions. Then natural and cultural landscape in Hindelang can be mostly maintained by extensive farming. Such a landscape has created a demand for coming tourists who are especially interested in maintaining in beautiful, natural, and cultural landscape.

In Japan, it is indispensable for the promoting rural tourism to maintain natural and cultural

landscape in rural mountainous regions. Although the new policy for the subsidy, which is directly paid to farmers in these areas, it is not yet enough to maintain rural cultural landscape truly. Furthermore, Japanese people have less interest in rural environment, for example than German. Then, we have to need more time in order to realize rural tourism in Japanese mountainous areas.

Acknowledgement

This study was financially supported by Grant-in-Aid for Scientific Research from the Japan Society for the promotion of Science, entitled "the system for the symbiosis of the tourist industry and agriculture in the Alps" (Head: Terutoshi Ishihara, Hannan University) in 1999 and 2000. The author wishes to thank Dr. Peter Haimayer at the University of Innsbruck and Mr. Jan Schubert at Kurverwaltung Hindelang for their helpful suggestions.

Note

1) Apartments translated from a German word, *Ferienwohnungen*, are often used in Germany as lodging facilities. An apartment means an accommodation for a long stay and consists normally from a kitchen, a living room, some bedrooms, and a bathroom.

References

- Bätzing, W. Hrsg. (1996): *Landwirtschaft im Alpenraum*. Blackwell, Berlin, 242S.
- Besler, W. (1992): Das Ökomodell Hindelang: eine Talschaft hilft sich selbst. In CIPRA (Commission internationale pour la protection des alpes), ed. *Erhaltung der traditionellen alpinen Kulturlandschaften*, Vaduz, 181-184.
- Borsdorf, A und Eck, H. (1986): *Hindelang Oberjoch: Wandern rund um den Jochpaß*. Eppe, Bergatreute, 175S.
- Brendle, U. (1999): *Musterlösungen im Naturschutz: Politische Bausteine für erfolgreiches Handeln*. Bundesamt für Naturschutz, Münster, 261S.

- Eder, P. (1997): Urlaub am Bauernhof in der Steiermark. *Arbeiten aus dem Institut für Geographie der Universität Graz*, 35, 61-77.
- Hemmer, I. (1997): Das Ökomodell Hindelamng: eine Erfolgsstory. *Geographie Heute*, 18(Juni), 12-15.
- Herz, D. (1993): *Hindelang und seine Gäste*. Konrad, Weissenhorn, 256S.
- Höppl, J. (1992): Strukturwandlungen in der Fremdenverkehrsgemeinde Hindelang, endogene Kräfte und Seniorentourismus. *Würzburger Geographische Manuskripte*, 28, 53-67.
- Ichida, T. (1997): Agriculture, nature conservation, and tourism in mountainous region: as a case of Bavaria. In Matsumura, K. ed. *Sanson no kaihatsu to kankyo hozon* (Development and environmental conservation in rural mountainous villages), Nansosha, Tokyo, 272-290. (in Japanese)
- Kasagi, H. (1999): Environmental conservation in rural area and evolution of rural accommodation in Bayern, Germany. *Journal of Systematic Regional Geography*, 4, 36-45. (in Japanese)
- Kramer, D. (1983): *Der sanfte Tourismus: Umwelt- und sozialverträglicher Tourismus in den Alpen*. ÖBV, Wien, 207S.
- Maier, J. (1970): *Die Leistungskraft einer Fremdenverkehrsgemeinde: Modellanalyse des Marktes Hindelang, Allgäu; ein Beitrag zur wirtschaftsgeographischen Kommunalforschung*. Institut für Wirtschaftsgeographie der Universität München, 467S. (=WGI-Berichte zur Regionalforschung H. 3).
- Maier, J. (1995): Hindelang, ein Modell ökologischer Dorfentwicklung: Zwischenbilanz einer Evaluation auch im Sinne nachhaltiger Entwicklung? *Berichte und Materialien (Arbeitskreis Freizeit und Fremdenverkehrsgeographie, Institut für Tourismus der FU Berlin)*, 14, 67-78.
- Miyazaki, T. ed. (1997): *Gurin turizumu to nihon no noson* (Green tourism and Japanese rural villages). Norin tokei kyokai, Tokyo, 239p. (in Japanese)
- Mose, I. (1988): *Sanfter Tourismus im Nationalpark Hohe Tauern: Probleme und Perspektiven am Beispiel des oberen Oberpinzgau*. Vechta, 119S. (=Verchter Arbeiten zur Geographie und Regionalwissenschaft, Bd. 6).
- Ruppert, K. (1994): Der deutsche Alpenraum: Raumorganisation im Spiegel agrarwirtschaftlicher Struktur- und Prozeßmuster. *Bericht zur deutschen Landeskunde*, 68, 291-323.
- Ukita, T. (1998): Green tourism in Germany, focusing on "Holiday on farm". *Tonami sanson chiiki kenkyujo kenkyu kiyo*, 15, 1-10. (in Japanese)
- Yamazaki, M., Oyama, Y. and Oshima, J. (1993): *Gurin turizumu* (Green tourism). Ie no hikari Kyokai, Tokyo, 222p. (in Japanese)